Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (currently amended) A data communication system, comprising:

at least three signal conductors;

a first and a second power supply terminal, for supplying currents of mutually opposite direction to the signal conductors respectively;

a driver circuit coupled between the power supply terminals and the signal conductors, the driver circuit being arranged to establish a combination of currents through respective ones of the signal conductors, the driver circuit configured to selecting successive combinations, depending on information to be transmitted, from a selectable set of combinations, at least three different ~~of~~ current levels to any signal conductor being used in the set, including a current level of current to the signal conductors from the first power supply terminal and a current level of current from the signal conductors to the second power supply terminal, a sum of the currents through the signal conductors substantially having a same value for each combination in the set and at least one of the conductors for at least one of the combinations not merely functioning in a differential pair relation with another one of the conductors;

wherein at least one of the combinations of the selectable set of combinations includes more than one of the current level of current to the signal conductors from the first power supply terminal or more than one of the current level of current from the signal conductors to the second power supply.

2. (original) A data communication system according to claim 1, wherein the driver circuit comprises an internal switchable current path for drawing current from the first power supply terminal to the second power supply terminal, the driver circuit activating the internal switchable current path depending on the combination being established, so

that a first and a second net current, from the first and the second power supply terminal to the signal conductors plus the internal switchable current path respectively, each remains substantially the same upon switching between different combinations.

3. (currently amended) A data communication system according to claim 2, wherein the internal current path is arranged so that none of the current from the internal current path is capable of flowing to any one of the signal conductors.

4. (original) A data communication system according to claim 2 the driver circuit being operable in a transmission mode and a low power mode, the driver circuit switching back and forth from the transmission mode and the low power mode while transmitting a combination of current with zero current through each of the signal conductors, the driver circuit making the internal switchable current path non-conductive in the low power mode.

5. (currently amended) A data communication system according to claim 4, wherein the driver circuit is arranged to make the internal switchable current path non-conductive with a speed so that a size of current through the internal switchable current ~~source~~ path decreases to zero at a slower rate than during switching for different combinations in the transmission mode.

6. (original) A data communication system according to claim 1, comprising a first plurality of current sources between the first power supply terminal and respective ones of the signal conductors and a second plurality of current sources between the second power supply terminal and respective ones of the signal conductors, the driver circuit controlling the selection of the patterns by controlling which of the current sources supply a unit current to the signal conductors.

7. (original) A data communication system according to claim 1, the driver circuit being arranged to selectably short circuit a part of current sources from the first and second

plurality with each other when one or more of the signal conductors draws no net current, so that a total current from both power supply terminals remains substantially constant.

8. (original) A data communication system according to claim 1, comprising a receiver circuit arranged to decode the information from the currents through the signal conductors depending on detection whether the currents through the signal conductors deviate from zero and in which direction.

9. (original) A data communication system according to claim 1, wherein each combination is selected under the control of a respective multi-bit data item, the number of selectable combinations being a power of two, further combinations of currents to respective ones of the signal conductors that have a same sum of currents as the selectable combinations being used for a signaling protocol that supports transmission of symbols that encode the multi-bit data items.

10. (currently amended) A data communication system according to claim 1, arranged to operate according to a protocol in which a first one of the combination of currents in which no current flows through the power supply ~~current~~ terminals is used as an idle symbol to indicate the absence of data.

11. (original) A data communication system according to claim 10, wherein the protocol involves transmitting a data content independent series of alternating combinations between the idle symbol and data dependent symbols.

12. (original) A data communication system according to claim 1, arranged to operate according to a protocol wherein the protocol involves transmitting an at least partly data independent one of the combinations as a repeat symbol to indicate repetition of preceding information.

13. (currently amended) A method of communicating data via at least three signal conductors, the method comprising:

using currents of mutually opposite polarity from a first and a second power supply terminal respectively to establish successive combinations of currents on respective ones of the signal conductors, the combinations being selected depending on information to be transmitted, so that a sum of the currents through the signal conductors substantially has a same value for each combination and at least one of the conductors in generation does not merely function in a differential pair relation with another one of the conductors, at least three different levels of current to any signal conductor being used in the set of selectable combinations, including a current level of current to the signal conductors from the first power supply and a current level of current from the signal conductors to the second power supply;

wherein at least one of the combinations includes more than one of the current level of current to the signal conductors from the first power supply terminal or more than one of the current level of current from the signal conductors to the second power supply.

14. (original) A method according to claim 13, wherein the sum is zero in all combinations.

15. (original) A method according to claim 14, wherein a combination in which currents to all signal conductors being zero are used as an idle symbol.

16. (original) A method according to claim 15, wherein a series of idle symbols is transmitted followed by changing combinations prior to the transmission of data-dependent combinations.

17. (original) A method according to claim 13, wherein each combination is selected under the control of a respective multi-bit data item, the number of selectable combinations being a power of two, further combinations of currents to or from respective ones of the signal conductors that have a same sum of currents as the selectable combinations being used in a signaling protocol that supports transmission of symbols representing the multi-bit data items.

18. (new) A data communication system, comprising:

at least three signal conductors;

a first and a second power supply terminal, for supplying currents of mutually opposite direction to the signal conductors respectively;

a driver circuit coupled between the power supply terminals and the signal conductors, the driver circuit being arranged to establish a combination of currents through respective ones of the signal conductors, the driver circuit selecting successive combinations, depending on information to be transmitted, from a selectable set of combinations, at least three different of current levels to any signal conductor being used in the set, including a current level of current to the signal conductors from the first power supply terminal and a current level of current from the signal conductors to the second power supply terminal, a sum of the currents through the signal conductors substantially having a same value for each combination in the set and at least one of the conductors not merely functioning in a differential pair relation with another one of the conductors;

wherein the driver circuit comprises an internal switchable current path for drawing current from the first power supply terminal to the second power supply terminal, the driver circuit activating the internal switchable current path depending on the combination being established, so that a first and a second net current, from the first and the second power supply terminal to the signal conductors plus the internal switchable current path respectively, each remains substantially the same upon switching between different combinations; and

wherein the internal current path is arranged so that none of the current from the internal current path is capable of flowing to any one of the signal conductors.